

# **Environmental Ethics and Sustainable Development: An Analysis of Rampal Coal Power Plant in Bangladesh**

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**Abstract:** Environmental ethics and sustainable development maintain a very close relationship with each other. Environmental ethics gives priority to the future generation and sustainable development also says about development considering the future generation. In this essay, Rampal coal power plant in Bangladesh has been analyzed focusing on the sustainability of the future generation. From this essay, it is found that the environmental specialists and UNESCO argue to stop the project but from the government is arguing showing the logic that the project is not harmful to the environment and the project authority can manage the probable environmental degradation because of it. The author of this essay has also found a stronger argument against the project.

**Keywords:** environment ethics, sustainable development.

## **1. Introduction:**

The green Earth, the mother of all living and non-living things is in threat. People admit but not take in mind that population growth and excessive human activities like, deforestation, destruction of habitats, overuse of energy resources, carbon emission, are occurring environmental pollution and degradation which leads to climate change in the earth. Paleontologists have hypothesized three possible causal drivers: natural climate change, human predation and significant trophic cascades following the (Anthropocentric) demise of woolly mammoths. Here, for the first time, it is cited that human activity is a major cause of global and systematic environmental change (Thomson & Gardiner, 2019). After the industrial revolution, people are very much eager for continuous economic growth

which is the root of tremendous economic growth and development with questionable sustainability. In respect of sustainable development, it includes three main pillars such as economic growth, social inclusion, and environmental protection. These pillars consist of qualitative and nonmonetary, as well as monetary and quantitative indicators to monitor (Soytas & Halisçelik, 2018).

Bangladesh, a south Asian lower-middle-income country facing a huge crisis in different areas, where insufficient electricity is one of the most important issues for her development. To meet up with the increasing demand for electricity in the agricultural, domestic and industrial sector, Bangladesh is going to implement a coal-based power plant at Rampal, the southern part of the country, which is close to world natural heritage, Sundarbans-the largest mangrove forest in the world. In this essay, the effect of the Rampal Coal Power Project would be analyzed in light of the environmental ethics and sustainable development criterion.

## **2. Environmental ethics:**

Environmental ethics deals with issues relating to environmental protection and conservation. Environmental ethics is human beings' ethical relationship with the natural environment (Cochrane, n.d.). In the great acceleration after World War II, the human population doubled in just 50 years to 6 billion by the end of the 20<sup>th</sup> century. This radical human expansion has had a dramatic effect on climate change of the earth. Human activity affects environmental change globally, systematically and at a fundamental level (Thomson & Gardiner, 2019). The practical goal of environmental ethics is to guide how the human race ought to interact with the natural environment including the nonhuman individuals that populate it as well as respond to environmental issues more generally (Sandlar, 2019). The environmental crisis prevails because the human treats everything in the non-human world as having no moral significance of its own. The human treats nature as something to which they owe no

direct moral duties (Thomson, 2019). As the human, animals and other creatures and nonliving things are the members of the environment of the Earth, it is natural to have interdependency and equilibrium situation among them. Any sort of interruption in the environment either directly or indirectly affects every member of the environment. The most intelligent member with controlling power over the other living and nonliving members of the environment, the human race is taking its advantage in favor of their interest, ignoring the others. Thus, environmental ethics is outlined as the moral relationship between humans and the natural environment. Environmental ethics discusses the ethical relationship between human beings and the natural environment which has become a new branch of philosophy. Philosophical responses on the issue raised in the early 1970s (Cochrane, n.d.). Environmental ethics emphasizes for the increased and improved moral regard for nonhuman and ecological system and lack of such regard it is commonly cited as a fundamental cause of environmental damage and degradation (Whyte & Coumo, 2019). In environmental ethics, the philosophers explain the responsibilities of humans to nature from different angles.

Anthropocentrism is commonly understood as the theory of value which maintains that only human beings or their experiential states have intrinsic moral value. The other non-human animals and other living organisms, species of living organisms or complex ecological systems have only instrumental value for the promotion of human welfare (Thompson, 2019). As the human think that the other creatures are only to serve the human race, the interest and welfare of the others are neglected. The human can think in this way, as every living and non-living creature is to serve the human if they cannot survive how can they serve the human? So, to protect the interest of the human, they should create a congenial environment for the other creature so that they can survive and can serve the human.

For the preservation of wild species and wild places sometimes the emphasis is given on the benefit to human beings and sometimes on the intrinsic value of the wild things themselves. Instrumental

and intrinsic value arguments can typically be found in the speeches and writings of the conservationists (Sandler, 2019). People may find many wild natures instrumentally valuable in many ways (Rolston, 1989). A beautiful place can be valued instrumentally when the spring warblers migrate through, the fall leaves change color, or during a thousand other ordinary or extraordinary occurrences throughout the year (Cafaro, 2019).

Defining the intrinsic value of nonhuman organism's species or ecosystems include selfhood, sentience, conation, possession of a telos, order, complexity, creativity, diversity, uniqueness and an ancient evolutionary, genealogy (Cafaro, 2019). According to Robert Elliot, intrinsic value has appealed variously to its beauty, diversity, richness, integrity, interconnectedness, variety, complexity, harmony, grandeur, intricacy and autonomy. These properties provide the basis for natural values (Elliot, 1997). So, the intrinsic value of nature is the collection of attributes in it which can shake up emotions and feelings of humans.

In respect of the conservation of the environment, the philosophers also give importance to consequentialism. Consequentialists typically claim that an act is right when it produces the best state of affairs (Hooker, 2008). The classical act-utilitarianism, the most traditional form of consequentialism, is an act when it can create maximum overall utility, where utility is considered as the optimal balance of the most pleasure and least pain (Hiller, 2019). John Stuart Mill's criticism of simplistic hedonic utilitarianism is that it is controversial to measure good states of affairs. So, the system consequentialism cannot provide good help with real-world decision making (Hiller, 2019).

The environmental ethicists are advocating for environmental protection and conservation by giving various theories for an understanding of the environment, its degradation and its conservation for the present and future generations. According to Rolston (Rolston, 2019), "keep nature in symbiosis with

humans. Keep the urban, rural and wild. Our future out to be the Semi-Anthropocene kept natural - with the natural basics- and entered carefully, full of cares for both humans and nature on this wonderland planet!" An anthropocentric ethic claims that we possess obligations to respect the environment for the sake of human well-being and prosperity (Cochrane, n.d.). It is very important to think about nature because the Earth is unique, and every state is boundaryless in the context of the environment. Once bad activity affects the others including the actor. So, collective efforts are essential in environmental protection and conservation. In the next section, sustainable development would be discussed.

### **3. Sustainable Development:**

The issue, Sustainable development has importantly achieved the fascination of economists, social scientists, and statesmen all over the world. Since the 1970s, every nation of the globe is taking the issue at the center point of all development planning and programs. It is one of the indisputable achievements of the Earth Summit, which is now firmly established as the “central dogma” of global environmentalism (Wilcox, 1992). The meaning and the definition of sustainable development is not yet clear universally. Much confusion about the meaning of sustainable development derives from the recent proliferation of similar terms used in related contexts: “sustainable use,” “sustainable growth,” “sustainable economy,” “sustainable society,” and so on (Wilcox, 1992). A report by the United Nations Environment Program, caring for the Earth, distinguishes sustainable development as the means of “improving the quality of human life while living within the carrying capacity of supporting ecosystems” (Wilcox, 1992). The most common definition of sustainable development is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs", which is given by the United Nations study which brought this issue first to the world's attention (Brundtland Commission, 1987). In other words, sustainable

development focuses on a development process that is biophysically admissible economically feasible and socially acceptable (Rajalakshmi, 2016).

The noble laureate Amartya Sen says we that to sustain, and when possible expand, freedoms, including the freedoms to meet our needs and to live our life according to certain standards and capabilities, and what humans value and have reason to think are important, without compromising these for future generations ( Sen, 2009).

According to UNESCO sustainable development has four dimensions, such as society, environment, culture, and economy which are interrelated, not separate. Sustainability is a paradigm for thinking about the future in which environmental, societal and economic considerations are balanced in the interest of improving quality life. For example, a prosperous society relies on a healthy environment to provide food and resources, safe drinking water and clean air for its citizens (UNESCO). Therefore, sustainable development is a paradigm where present development must not affect the future generation's prospects in connection with society, environment, culture, and economy. In the next section, the relationship between environmental ethics and sustainable development is going to be discussed.

#### **4. Environmental Ethics and Sustainable Development:**

The human race made unprecedented progress in science and technology that pushed them forward to development which eased the life of a human more sophisticated, enjoyable and comfortable in the 20th century. At the same time, the human has done remarkable damage to the environment. The development cannot be done without considering the environmental conservation. The quality of life can help in this understanding and throw light not only on the demands of sustainable development but also on the content and relevance of what is identified as environmental issues. The environment

is seen as the 'state of nature', including such measures as the extent of forest cover, the depth of the groundwater table, the number of living species and so on (Sen, 2009).

The moral standing to future generations has been considered necessary as many environmental problems, such as climate change and resource depletion, will affect future humans. Moreover, our actions and policies will have a great impact on the well-being of future individuals. In light of these facts, some philosophers have founded their environmental ethics on obligations to these future generations (Cochrane, n.d.).

However, at the beginning of the new century, a number of challenges, such as population growth control and improving quality of life, use of natural resources in a rational manner, exploring new resources, protecting environmental and ecological degradation and promoting social progress, and so on had to be dealt with (Chhokar, 2004). Going ahead of a remarkable distance through the highway of development, when the human race looks back, it is found that unpredictable and unrepairable environmental degradation has occurred because of the unplanned development.

As a result, the United Nations Conference on Environment and Development was held in Rio De Janeiro in 1992. To review the progress since the Rio conference, and to agree on a new global deal on sustainable development, the World Summit on Sustainable Development (WSSD) was taken place in Johannesburg in 2002. Both conferences drew the attention of people around the globe to the degradation of the environment. The outcome of the conferences influences a lot in making policy decisions relating to the development, which can address the environmental issues properly.

In September 2000, building upon a decade of major United Nations conferences and summits, world leaders came together at the United Nations Headquarters in New York to adopt the United Nations Millennium Declaration. In the Declaration of UNDP, nations were committed to building a new

global partnership and set out a series of eight time-bound targets with a deadline of 2015 that has become known as the Millennium Development Goals (MDG). Among the 8 goals, one of the most important goals is ensuring environmental sustainability.

Moreover, the term sustainable development is being used by the UN member states as 17 sustainable development goals (SDGs) are fixed by the UN for them which are attainable by 2030. Among the 17 sustainable development goals (SDGs), 3 are directly related to the environment such as Climate Action, Life below Water and Life on Land. In the case of achieving the sustainable development goals, people need to be aware of the environmental issues and acquire background information to enable them to make decisions. The UN has built a bridge between sustainable development and environmental conservation, any decision regarding development should be environment-friendly to be sustainable.

Sustainable development considers the environmental effects on future generations. It is unwilling to make development ignoring the safety and security of the future generation in the context of the environment. The intergenerational ethics says that strict Kantians have a ready answer: since future people are not inherently different, the categorical imperative commands the same respect for them as for the contemporaries ( Nolt, 2019). As the present generation wants to make their own life safe, secure and comfortable, it is their ethical duty to ensure the same thing for their future generation. For utilitarianism, the outlines of responsibilities to future people are also clear. Since the welfare of each future person counts equally with the welfare of the present person and since the present person's duty according to classical utilitarianism is to maximize overall welfare, one should, to a first approximation aim for total welfare that is as high as can be indefinitely sustained (Nolt, 2019). Conservation biologists often connect the concept of sustainability intending to protect biological diversity. (Norton, 2019). Though the different discipline pays attention to define sustainability in



different ways, it is common to all that sustainability is something to live sustainably with an obligation to the future generation. So, the objective of sustainable development and environmental ethics is to consider the welfare of the future generation in respect to environmental conservation. In the following section, the Rampal Coal Power Plant Project would be discussed.

## **5. Introduction of Rampal Coal Power Plant Project:**

With a view to meeting up increasing demand for electricity, the Government of Bangladesh has taken the initiative to install a new coal-based thermal power plant, known as the Rampal Power Plant. The power plant project is going to be implemented jointly by Bangladesh and India share 30% of the total cost equally and 70% cost from the loan. The project with a production capacity of 1320 (MW) is also known as the Maitree Super Thermal Power Project, which is one of the eleven coal-fired power plants, owned by Power Development Board (BPDB) of Bangladesh plans for commissioning by 2021 (Islam, 2018). The location of the project is at Rampal Upazila in Bagerhat District, southwest part of Bangladesh, which is 14 km. away from the world's largest mangrove forest Sundarban and 65 km away from the world heritage boundary. The Government has acquired 1,834 acres of agriculture and fish (shrimp) farming land to build the Rampal power plant. In the total area of land, only 86 acres are owned by the government, and the rest of the land is from private owners. The estimated cost of the project is US\$1.82 billion (Islam, 2018).

Primarily the project was supposed to be implemented in India first. Because of the peoples' protest inside India, the authority selected the site at Rampal in Bangladesh. In Bangladesh people also protested against the implementation of the project. They organized meetings, seminars, human chains, processions to manifest their protest against this project. The activists filed a suit at the High Court, but the judgment was not in their favor.

### **5.1. Site Selection and Impact Assessment by the Government Agency:**

Based on the report of the Ministry of Environment and Forest, Government of Bangladesh, the site selection arguments have been prepared. Before the selection of the site, several scientific pieces of research have been conducted to understand the biodiversity, ecological changes and biotic and abiotic factors that are essential for the future management of the project. In the said researches, the scientific monitoring information indicates that the ecosystem and health of the property are in good condition. From the government side, it is advocated that the power plant site satisfies the distance as one of the conditions given in the Sundarbans Ecologically Critical Area (ECA) as the site is 14 km away from the northeast of the Sundarbans and 65 km from the World Heritage Site (WHS). The project has been designed and developed with modern Ultra Super Critical Technology and the latest environment-friendly measures. Adoption of such advanced technology and logistics/process, including but not limited to the emission control measures like Electrostatic Precipitator (ESP), Flue Gas Desulphurization (Govt. Report, ).

### **5.2. Scholarly Impact Assessment of the Project:**

On the other hand, Dr. Abdullah Harun Chowdhury (Chowdhury, 2012), a professor of Environmental Science Discipline at Khulna University with a specialist team has conducted scientific research on the environmental impact of the project on Sundarbans and surrounding areas during the period from August 2011 to July 2012 in 10 permanent stations. In his research, he has evaluated the impacts in terms of distribution, quantity, quality, seasonality, socio-economic and ecological importance through field visits and field surveys (Chowdhury,2012). Dr. Chowdhury's team has to identify a matrix for the research in a 21-point score scale ranging from -1 to -10 for negative impacts and +1 to +10 for "0" for no impact (neutral impact) (Chowdhury,2012). Using the matrix his team has assessed the environmental impact considering the physical, biological, social and economic

environment which indicates that most of the impacts of the coal-fired power plant are negative and irreversible (-81), which can't be mitigated in any way (Chowdhury,2012). It is indicating that climate, topography, land use pattern, air, and water (surface and ground both) quality, wetlands, floral and faunal diversity, capture fisheries and tourism will be affected permanently due to proposed coal-fired power plant. It has a few positive impacts on urbanization (+19) which very nominal in comparison with irreversible (-81).

### **5.3. UNESCO's Assessment Report:**

In the report, UNESCO has been made 10 recommendations about the Rampal coal power plant. The UNESCO's report on the project says that the proposed Rampal power plant, a 1320-megawatt super thermal power plant located just 65 kilometers away from the World Heritage property, poses a serious threat to the site. The team identified four key concerns related to the plant's construction: pollution from coal ash by air, pollution from wastewater and waste ash, increased shipping and dredging, and the cumulative impact of industrial and related developmental infrastructure. The mission recommends that the Rampal coal power plant project should be canceled and relocated to a more suitable place.

Where there is development, there is air pollution, water pollution, noise pollution, toxic contamination with air and water which affects flora and fauna of the environment. Sustainable development plans like SDGs can play a major role in this dilemma. In the present world, some countries are struggling for earning basic needs and some others are competing for unlimited wealth. As there is no benchmark for development, people want more and more. The unnecessary development should be avoided, and people should go for a sustainable development program that can address environmental conservation.

## 6. Conclusion:

Both environmental ethics and sustainable development are conscious of environmental conservation for future generations. It can be concluded in this way that the project has a strong negative impact on the environment and people's livelihood at present, let alone the future generation. It has a remarkable threat not only to the livelihood of the people of the project area but also to the flora and fauna of Sundarbans. It is also noticeable that the implementing authority is only considering the short-term gain accepting the long-term detriment to the environment. The project is quite unable to comply with the environmental ethics and sustainable development criterion. Therefore, the project authority can either shift the project to another location or can leave it.

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